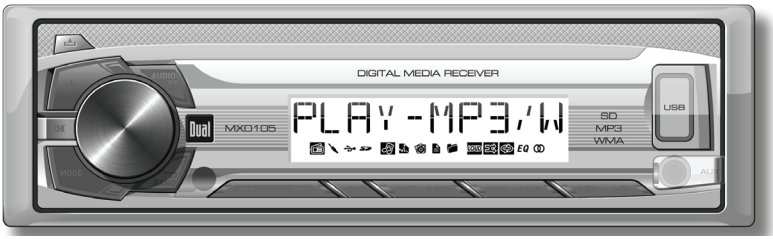


MXD105

INSTALLATION/OWNER'S MANUAL

AM/FM Receiver with Detachable Face

MP3 **WMA**

USB ***AUX***

Dual®

Preparation

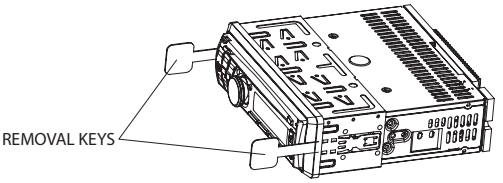
Please read entire manual before installation.

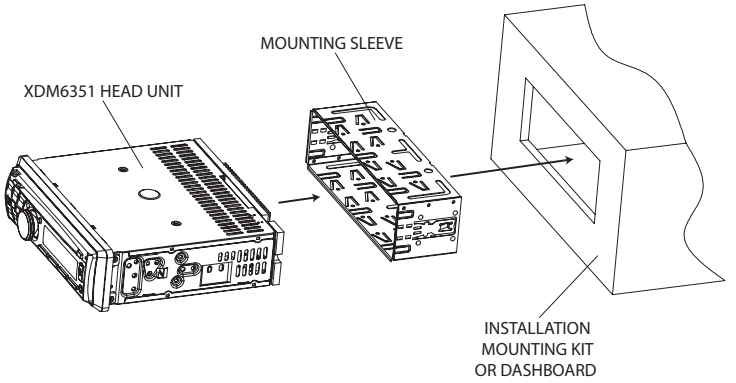
Before You Start

- Disconnect negative battery terminal. Consult a qualified technician for instructions.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight, or where it would be subject to dust, dirt or excessive vibration.

Getting Started

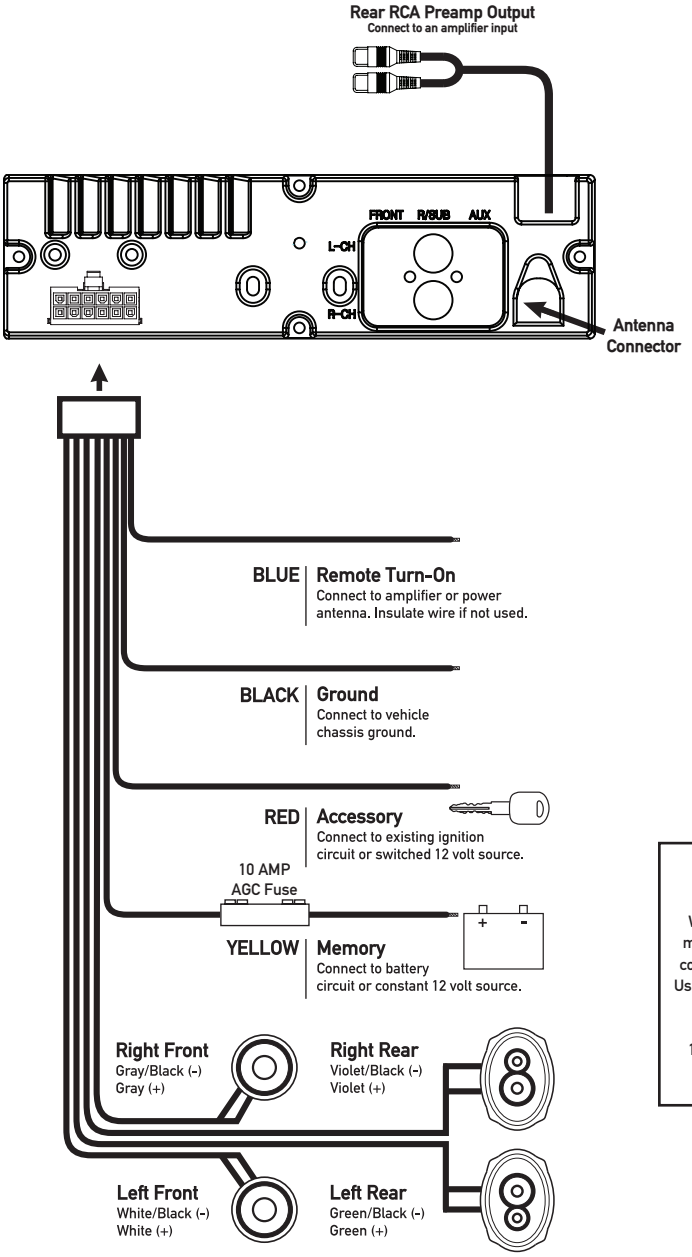
- Remove trim ring from unit.
- Remove 2 transit screws located on top of the unit.
- Insert the supplied keys into the slots as shown, and slide the unit out of the mounting sleeve.
- Install mounting sleeve into opening, bending tabs to secure.
- Connect wiring harness and antenna. Consult a qualified technician if you are unsure.
- Certain installations may require an installation kit and/or wiring harness adapter (sold separately).
- Test for correct operation and slide into mounting sleeve to secure.
- Snap trim ring into place.





TYPICAL FRONT-LOAD DIN MOUNTING METHOD

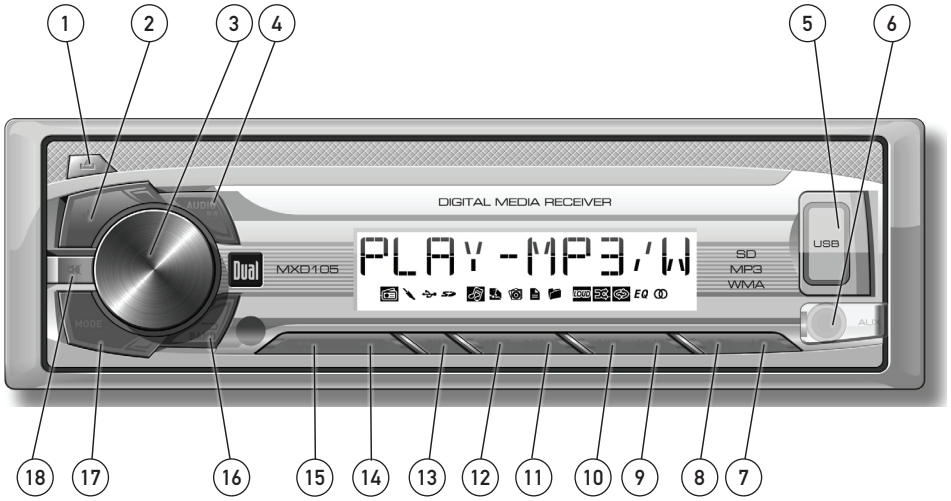
Wiring Diagram



FUSE

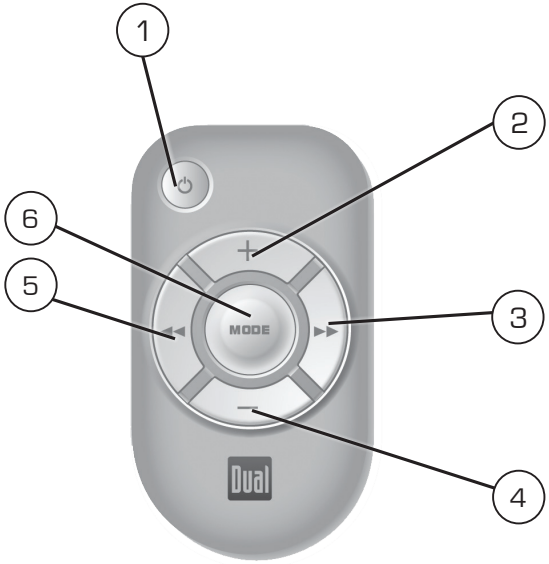
When replacing the fuse, make sure new fuse is the correct type and amperage. Using an incorrect fuse could damage the radio.
The MXD105 uses one 10 amp AGC fuse located in-line.

Control Locations - Receiver



1. Release
2. Power
3. Volume Knob
4. Audio / Menu
5. USB Port
6. Auxiliary Input
7. Preset 6 / Folder Up
8. Preset 5 / Folder Down
9. Preset 4 / Play / Pause
10. Preset 3 / Intro
11. Preset 2 / Random
12. Preset 1 / Repeat
13. Display
14. Tune Up
15. Tune Down
16. Band / Go Back
17. Mode
18. Mute

Control Locations - Remote



1. Power
2. Volume Up
3. Tune Up
4. Volume Down
5. Tune Down
6. Mode

General Operation

Faceplate Removal	Press **RELEASE** and pull away from the left side to remove. To re-install, insert right side of faceplate first then push left side to secure.
Power On/Off	Press ⏻ or any other button to turn the unit on. Press ⏻ to turn the unit off.
Mode	Press MODE to select between AM/FM, USB, SD or auxiliary input modes. Modes of operation are indicated in the display. SD and USB modes will not appear unless an SD Card is inserted or a USB device is connected.
Auxiliary Input	The MXD105 offers a 3.5 mm auxiliary input port on the front panel of the unit for connecting an audio device, MP3 player, etc. Press **MODE** to select auxiliary input mode.
Volume	Adjust volume using volume knob (00-47).
Display	The radio frequency (tuner mode) or MP3/WMA title/track information (USB and SD modes) will be shown by default. Press DISP to display the clock. The default display will return after five seconds. When in USB or SD mode, the display will alternate between track number/elapsed time and available MP3/WMA information, including file name, song title, artist name, album name and folder name.
Reset	Press **RESET** upon initial installation or if abnormal operation occurs. Reset button is located behind the front panel.
Set the Clock	With the unit on, press and hold **DISP** until the clock begins to flash, then release. Turn the **volume knob** to the right to adjust the hours or to the left to adjust the minutes.
12/24-hour Clock	The clock will display 12-hour AM/PM time in USA frequency spacing mode (PM 10:00). In European frequency spacing mode, the clock will display 24-hour time (22:00).
Setup Menu	Press and hold **AUDIO/MENU** for more than 3 seconds to access the setup menu. Press **AUDIO/MENU** momentarily to select between the menu functions and rotate the **volume knob** left/right to adjust or activate the desired function.

General Operation - Setup Menu

Menu Function	Options	Action
Auto Station Store	AUTO STORE	Press **SELECT** to seek and save 6 strong stations in the current band. **(Tuner mode only)**
Local/Distance Tuning	LOCAL OFF	Activates distance tuning (**Tuner mode only**).
	LOCAL ON	Activates local tuning for strong station reception only **(Tuner mode only)**.
Tuner Frequency Spacing	FREQ USA	Programs the unit to USA tuner spacing. (200kHz for FM and 10kHz for AM). **(Tuner mode only)**
	FREQ EURO	Programs the unit to European tuner spacing. (50kHz for FM and 9kHz for AM). **(Tuner mode only)**
Auxiliary Input	AUX ON	Enables the front panel 3.5mm auxiliary input.
	AUX OFF	Disables the front panel 3.5mm auxiliary input.
Beep Confirmation	BEEP OFF	Disables the confirmation beep.
	BEEP ON	Enables the confirmation beep.
Programmable Turn On Volume	PRO-VOL #	Programs unit to always turn on at a specific volume (default is OFF). Any volume level 1-46 can be selected.
Power on Message	MSG OFF	Disables power on message. (example: GOOD MORNING)
	MSG ON	Enables power on message to be displayed.
Scrolling Option	SCROLL 15 S	Programs unit to scroll information once every 15 seconds (default).
	SCROLL ONCE	Programs unit to scroll once, then show the first 10 characters on display.
	SCROLL ON	Programs unit to scroll continuously.
	SCROLL OFF	Programs unit to show the first 10 characters on the display.
Demonstration Mode	DEMO OFF	Disables the demonstration mode.
	DEMO ON	Enables the demonstration message.

General Operation

Audio

Press **AUDIO/MENU** momentarily to select between Bass, Treble, Balance and Fader.

Bass

Press **AUDIO/MENU** until **BASs** appears then rotate volume knob left/right to adjust (-7 minimum / +7 maximum).

Treble

Press **AUDIO/MENU** until **TREBLE** appears then rotate volume knob left/right to adjust (-7 minimum / +7 maximum).

Balance

Press **AUDIO/MENU** until **BAL** appears then rotate volume knob left/right to adjust (BAL 10L - BAL 10R).
BAL EVEN represents equal balance.

Fader

Press **AUDIO/MENU** until **FADER** appears then rotate volume knob left/right to adjust (FAD 10R - FAD 10F).
FAD EVEN represents equal fader.

AM/FM Tuner Operation

Seek Tuning

Press **TUNE ◄◄** or **TUNE ►►** momentarily to seek to the next strong station.

Manual Tuning

Press and hold **TUNE ◄◄** or **TUNE ►►** until "MANUAL" appears, then press **TUNE ◄◄** or **TUNE ►►** momentarily to change radio frequency up or down one step at a time. Press and hold to advance quickly.

Band

Press **BAND** to select between FM1, FM2, FM3, AM1 and AM2 bands.

Storing and Recalling Station Presets

Up to 18 FM stations and 12 AM stations can be stored. To store a station, select the desired band and station. Press and hold the desired preset button (1-6) for more than 2 seconds. When stored, the preset number will appear in the display. The station can be recalled anytime by pressing the corresponding preset button.

USB / SD Card Operation

Connecting a USB Device (sold separately)

To play MP3/WMA files from most USB mass storage devices, line up the USB connector and insert the USB device into the MXD105's USB port.

Inserting an SD Card (sold separately)

To play MP3/WMA/WAV files from an SD card, insert an SD card into the SD card slot with the label facing left. It will click into place when properly inserted. To remove the card, press in until it clicks, then pull to remove.

Playing Music

When a USB device is first connected, "LOAD" will appear in the display and playback will begin momentarily. Depending on the number of files and folders, it may take several seconds for the device to begin playing. If no valid MP3/WMA files are detected, "NO FILE" will be displayed and the last mode will be resumed.

Track Select

Press **TRACK ►►** to skip to the beginning of the next track. Press **TRACK ◄◄** to return to the beginning of the current track. Pressing **TRACK ◄◄** again skips to the beginning of the previous track.

Fast Forward and Reverse

Press and hold **TRACK ►►** or **TRACK ◄◄** on the remote control to fast forward or reverse a track.

Pause

Press **►/❚❚** to temporarily stop USB playback.
Press **►/❚❚** again to resume playback.

Displaying Information

ID3 tag and file/folder information will be automatically changed during playback. Press **DISP** to view the clock. Default display will resume after five seconds.

Repeat

Press **RPT** to choose between:
- Current Song - Continuously repeats selected track.
- Current Folder - Continuously repeats all files in folder.

Random

Press **RDM** to choose between:
- Off - Cancels RDM function.
- All Songs - Plays all tracks in random order.
- Current Folder - Plays all tracks in folder in random order.

Intro

Press **INT** to enter the Intro menu, then turn the volume knob to select one of the following options:
- Off - Cancels the INT function.
- All Songs - Plays first 10 seconds of each track.
- Current Folder - Plays first 10 seconds of each track in folder.

USB / SD Card Operation

Character Support

Maximum character display information
- Track name – 64 character maximum
- Directory name – 64 character maximum
- *Song title – 64 character maximum
- *Artist name – 64 character maximum
- *Album name – 64 character maximum

*Song title, artist name and album name will only be displayed if included with the MP3/WMA file.

Media Compatibility

The following types of files are compatible:
- MP3 data
- WMA data

The following types of files are not compatible:
- WMA files that are protected by DRM (Digital Rights Management).
- WMA lossless format
- MP3 PRO format
- MP3 playlists
- WAV format

Playback Order

MP3/WMA playback sequence is based on order the files are copied to the USB/SD device and begins in the root folder. Any empty folders or folders that do not include MP3/WMA files are skipped. Depending on your software, the playback order may vary.

Playback Capacity

- Maximum number of files: 9999
- Maximum number of folders: 999
- Maximum number of folder levels (sub folders): 8

Note: If the number of files/folders exceeds the maximum outlined above, the additional files/folders will be ignored.

Note: Devices that exceed the maximum number of files or folders may not function properly.

USB Device Compatibility

Due to the differences of USB devices, some devices may not be compatible. USB devices must be 'mass storage class' and formatted to the FAT or FAT32 file system in order to ensure compatibility. USB devices must be 32GB or smaller in capacity to be compatible.

USB / SD Card Operation

Additional MP3/WMA Information	Only MP3 files with filename extension (.mp3) can be played. Only WMA files with filename extension (.wma) can be played. Do not attempt to play non-MP3/WMA files with the MP3/WMA extension.
Sampling Frequency Rates	
MP3	8kHz ~ 48kHz
WMA	8kHz ~ 48kHz
Transfer Bit rates	
MP3	8kbps ~ 320kbps constant Variable bit rates
WMA	8kbps ~ 384kbps constant Variable bit rates
	Note: Some files may not play or be displayed correctly, depending on sampling rates and bit rates.
MP3 Tag Display	ID3 tags Version 1.0 to 2.0
	Note: If an invalid ID3 tag version is detected, "NO SUPPORT" will scroll on the display.

Troubleshooting

Problem	Cause	Action
Unit will not turn on (no power)	Yellow wire not connected or incorrect voltage Red wire not connected or incorrect voltage	Check connections for proper voltage (11~16VDC)
	Black wire not connected	Check connection to ground
	Fuse blown	Replace fuse
Unit has power (but no sound)	Speaker wires not connected	Check connections at speakers
	One or more speaker wires touching each other or touching chassis ground	Insulate all bare speaker wires from each other and chassis ground
Unit blows fuses	Yellow or red wire touching chassis ground	Check for pinched wire
	Speaker wires touching chassis ground	Check for pinched wire
	Incorrect fuse rating	Use fuse with correct rating
NO FILE appears on display	No playable MP3/WMA files found on the device	Check the device for valid MP3/WMA files
NO SUPPORT appears on display	An invalid ID3 tag version is present	Version 1.0 to 2.0 ID3 tags are supported.

Limited One Year Warranty

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

Dual Electronics Corp. warrants this product to the original purchaser to be free from defects in material and workmanship for a period of one year from the date of the original purchase.

Dual Electronics Corp. agrees, at our option, during the warranty period, to repair any defect in material or workmanship or to furnish an equal new, renewed or comparable product (whichever is deemed necessary) in exchange without charges, subject to verification of the defect or malfunction and proof of the date of purchase. Subsequent replacement products are warranted for the balance of the original warranty period.

Who is covered? This warranty is extended to the original retail purchaser for products purchased from an authorized Dual dealer and used in the U.S.A.

What is covered? This warranty covers all defects in material and workmanship in this product. The following are not covered: software, installation/removal costs, damage resulting from accident, misuse, abuse, neglect, product modification, improper installation, incorrect line voltage, unauthorized repair or failure to follow instructions supplied with the product, or damage occurring during return shipment of the product. Specific license conditions and copyright notices for the software can be found via www.dualav.com.

What to do?

1. Before you call for service, check the troubleshooting guide in your owner's manual. A slight adjustment of any custom controls may save you a service call.

2. If you require service during the warranty period, you must carefully pack the product (preferably in the original package) and ship it by prepaid transportation with a copy of the original receipt from the retailer to an authorized service center.

3. Please describe your problem in writing and include your name, a return UPS shipping address (P.O. Box not acceptable), and a daytime phone number with your shipment.

4. For more information and for the location of the nearest authorized service center please contact us by one of the following methods:

   - Call us toll-free at 1-866-382-5476
   - E-mail us at cs@dualav.com

Exclusion of Certain Damages: This warranty is exclusive and in lieu of any and all other warranties, expressed or implied, including without limitation the implied warranties of merchantability and fitness for a particular purpose and any obligation, liability, right, claim or remedy in contract or tort, whether or not arising from the company's negligence, actual or imputed. No person or representative is authorized to assume for the company any other liability in connection with the sale of this product. In no event shall the company be liable for indirect, incidental or consequential damages.

FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Specifications

FM Tuner

Tuning range: **87.5MHz-107.9MHz**
Usable sensitivity: **8.5dBf**
50dB quieting sensitivity: **10dBf**
Stereo separation @ 1kHz: **>30dB**
Frequency response: **30Hz-13kHz**

AM Tuner

Tuning range: **530kHz-1710kHz**
Usable sensitivity: **<42dBu**
Frequency response: **30Hz-2.2kHz**

General

Speaker output impedance: **4~8 ohms**
Line output voltage: **2 Volts RMS**
Dimensions: **7" x 7" x 2" (178 x 178 x 50 mm)**

Design and specifications subject to change without notice.

CEA-2006 Power Standard Specifications
(reference: 14.4VDC +/- 0.2V, 20Hz~20kHz)

Power Output: 18 Watts RMS x 4 channels at 4 ohms and $\leq$ 1% THD+N
Signal to Noise Ratio: 70dBA (reference: 1 watt into 4 ohms)

Notes

Dual Electronics Corp.
Toll Free: 1-866-382-5476
9AM-5PM EST, Monday-Friday

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